

REMARKS

Claims 1-4 and 8-11 are pending in this application. Claims 1 and 3 are amended by this response. Support for these amendments is as follows: Claim 1 (Specification, paragraphs 15-17, 19, 27, 31; p. 18, Table 3); Claim 3 (Specification, paragraphs 20 and 21). Claims 8 and 9 are cancelled. No new matter is added.

Claims 1-4 and 8-11 are rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (Office Action p. 2)

Claim 1 is amended to specify that the amount of filler is 450-900 parts by mass total. (Specification, paragraph 31 and p. 18, Table 3) Claims 3 and 8 are rejected for reciting “0.80 mole to 1.00 mol or less.” (Office Action, p. 2) The phrase “or less” following the 1.00 mol is deleted from claim 3 to alleviate any confusion. Claim 8 is cancelled. The rejections are believed to be overcome

Claims 1-4 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP (2001139768) in view of Sakurai et al (U.S. Patent No. 4,755,228), and further in view of Zampini (U.S. Patent No. 5,932,389). (Office Action, p. 2)

JP 2001139768 is unlike the claimed invention because the reference discloses (a) a macromolecular novolak type phenol resin of weight average molecular weight 50,000 or more and (b) a novolak type phenol resin of weight average molecular weight 50,000 or less, obtained by polystyrene conversion. (JP 2001139768, Basic-Abstract) The phenolic novolak (a) is different from the phenolic novolak used in the claimed invention because the molecular weight is higher. JP 2001139768 does not disclose the lower limit of molecular weight of the phenolic novolak (b). However, Examples 1 and 2 of the reference use phenolic novolak (b) of molecular weight 14,000. (JP 2001139768, Translation, provided) The weight-average molecular weight of the phenolic novolak of the claimed invention is 3700 or less and, therefore, different than phenolic novolak of the reference with a markedly higher molecular weight.

Further, JP 2001139768 fails to teach or disclose the blending ratio of the claimed invention in which the aldehyde (F) and the phenol (P) in a range of 0.8 to 1.00 mole. The phenol, an aldehyde, and a phosphoric acid of the claimed invention are reacted in a heterogeneous reaction. The specification states that when the blending ratio of the aldehyde (F) and the phenol

(P) is in a range of 0.8 to 1.00 according to the mole standard, the phenolic novolak used in the present invention can be produced at a high yield. (Specification, paragraphs 17-19)

Also, JP 2001139768 does not teach or disclose the use of a phosphoric acid in the reaction. The Office Action asserts that “the recited use of phosphoric acid in a reaction has no probative value in the instant product claims.” (Office Action, p. 3) However, the specification of the claimed invention states that the phosphoric acid used as the acid catalyst plays a significant role to provide a phase separation reaction with the phenol in the presence of water and that the blending amount of the phosphoric acid is very influential on the control of a phase separation effect. (Specification, paragraphs 20 and 21) The blending amount of phosphoric acid is 5 parts by mass or more to 100 parts by mass of phenol. (Amended claim 1; Specification, paragraph 21)

Sakurai et al. is cited to compensate for the lack of disclosure of wollastonite fiber in JP 2001139768. Sakurai et al. disclose that incorporating more than 60 wt% of wollastonite fibers is detrimental to the strength and the corrosion resistance of the molding. (Sakurai et al., col. 2, l. 25-29) In contrast, the claimed invention recites 350 to 900 parts by mass of wollastonite to produce the phenolic resin molding material. (Amended claim 1; Specification paragraphs 31 and 32) For example, Example 4 of the present invention, with 750 parts by mass of wollastonite, shows wollastonite as 88 wt% of the inorganic filler and 76 wt% of the total composition. Thus, Sakurai et al. directly teach away from the claimed invention.

Zampini and Huang et al. are cited to compensate for the lack of disclosure of polydispersity of the claimed invention in JP 2001139768. While the Zampini and Huang et al. disclose polydispersities or values that can be used to determine the polydispersity of the respective novolak resins, the references do not compensate for the deficiencies of JP 2001139768 and Sakurai, as discussed above.

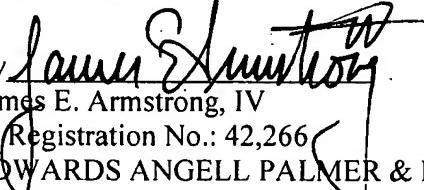
None of the references, alone or in combination, teach or disclose reacting a heterogeneous reaction of a phenol and an aldehyde in the presence of a phosphoric acid. None of the references teach or disclose the blending ratio of the claimed invention in which the aldehyde (F)

and the phenol (P) in a range of 0.8 to 1.00 mole. The Applicants respectfully request reconsideration of the rejection under 35 U.S.C 103(a).

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

By 
James E. Armstrong, IV
Registration No.: 42,266
EDWARDS ANGELL PALMER & DODGE
LLP
P.O. Box 55874
Boston, Massachusetts 02205
(202) 478-7375
Attorneys/Agents For Applicant

Enclosure: JP 2001139768 Partial Translation

JP 2001139768 Translation paragraphs 12 and 13

<abridged translation>

[0012] [0013]

“This novolak resin of weight average molecular weight 52,000, novolak resin of weight average molecular weight 14,000 (PR-50731 made by SUMITOMO DUREZ CO., LTD.), hexamethylenetetramine, a filler, a hardening adjvant, a lubricating agent and colorant were mixed in the ratio shown in table 1 and melt extruded, to obtain a molding material.”